REMARKS/ARGUMENTS

Examiner Interview Summary

Claims 1-20 were discussed during an examiner telephonic interview with Examiner Jason Proctor on April 17, 2007 and the undersigned representative. It was indicated that a formal response with the proposed claim amendments submitted herewith in accordance with the discussion would potentially overcome the rejections.

Claim rejections 35 U.S.C. § 112

Claims 1-20 are rejected under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the written description requirement. The Applicant respectfully disagrees but has amended independent Claims 1, 6 and 14 to recite computing a speculative conditional jump address before a condition for the conditional jump instruction is satisfied after receipt of the I/O read data, as claimed.

The specification of the instant application explicitly described that the virtual microcontroller pre-calculates the jump address and makes the jump decision after receipt of I/O read data (see page 5, lines 1-4, lines 11-14, lines 21-23 and page 5 line 30 to page 6 line 2). Moreover, Applicant respectfully submits that the specification of the instant application describes computing a

speculative conditional jump address before computing that a condition for the conditional jump instruction is satisfied, as claimed. For example, the specification described that the virtual microcontroller always assumes that a jump condition is true and speculatively computes the target jump location as if the condition requiring the jump has been satisfied (see page 27, lines 5-12).

Accordingly, Claims 1, 6 and 14 are in compliance with the written description requirement, under 35 U.S.C. §112, first paragraph. Dependent claims are in compliance with the written description requirement, under 35 U.S.C. §112, first paragraph by virtue of their dependency. As such, withdrawal of the rejection, under 35 U.S.C. §112, first paragraph is earnestly solicited. As such, allowance of Claims 1-20 is earnestly solicited.

Claims 1-20 are rejected under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the enablement requirement. The Applicant respectfully disagrees but has amended independent Claims 1, 6 and 14 to recite computing <u>a speculative conditional jump address before</u> a condition for the conditional jump instruction is satisfied after receipt of the I/O read data, as claimed. Accordingly, the computation of the speculative conditional jump address is speculative, e.g., based on the assumption that a condition for the conditional jump instruction is satisfied after the I/O read data is received. As a

result, the computation is based on assuming that a condition is true, hence it does not require the actual knowledge of the condition.

Accordingly, Claims 1, 6 and 14 are in compliance with the enablement requirement, under 35 U.S.C. §112, first paragraph. Dependent claims are in compliance with the enablement requirement, under 35 U.S.C. §112, first paragraph by virtue of their dependency. As such, withdrawal of the rejection, under 35 U.S.C. §112, first paragraph is earnestly solicited. As such, allowance of Claims 1-20 is earnestly solicited.

Claims 1-20 are rejection under 35 U.S.C. §112, first paragraph as being allegedly indefinite for failing to particularly point out and distinctly claim the subject matter of the present invention. Applicant respectfully traverses but has amended independent Claims 1, 6 and 14 to further clarify the subject matter of the present invention.

For example, independent Claim 1 now recites a virtual microcontroller ... detecting the I/O read data ... computing a speculative jump address ... determining ... whether to proceed with instruction execution at a next consecutive address or at the speculative conditional jump address, as claimed and executing the instruction accordingly. As a result, when the condition is met both the microcontroller and the virtual microcontroller execute the instruction at

the conditional jump address. Similarly, when the condition is not met, both the microcontroller and the virtual microcontroller execute the instruction at the next consecutive address.

Accordingly, independent Claims 1, 6 and 14 particularly point out and distinctly claim the subject matter of the embodiments of the present invention. Dependent claims particularly point out and distinctly claim the subject matter of the embodiments of the present invention by virtue of their dependency. As such, withdrawal of the rejection, under 35 U.S.C. §112, second paragraph, for being allegedly indefinite for failing to particularly point out and distinctly claim the subject matter of the present invention is earnestly solicited. As such, allowance of Claims 1-20 is earnestly solicited.

Claims 1-20 are rejected, under 35 U.S.C. §112, second paragraph as being allegedly incomplete for omitting essential steps. The rejection asserts that "the omitted steps are: the microcontroller transmitting said conditional jump instruction to the virtual microcontroller" because "independent claims require that the virtual microcontroller receive said conditional jump instruction, yet none of independent claims 1, 6, or 14 recites a step wherein the microcontroller transmits said conditional jump instruction." Applicant respectfully disagrees but in the interest of expediting prosecution of this case has amended independent Claim 1 to recite "a microcontroller, wherein said microcontroller sends I/O read

data to a virtual microcontroller, and wherein the I/O read data is followed by a conditional jump instruction", as claimed.

As per the Examiner Interview on April 17, 2007, Applicant wishes to clarify that the conditional jump instruction is not sent to the virtual microcontroller, but after the I/O read data is received, the virtual microcontroller and the microcontroller both execute a conditional jump instruction (see page 27, lines 14-16 of the instant application). Therefore, the I/O read data is followed by a conditional jump instruction. Applicant has respectfully amended independent Claims 6 and 14 to recite a limitation similar to that of independent Claim 1. As such, withdrawal of the rejection, under 35 U.S.C. §112, second paragraph as being allegedly incomplete for omitting essential steps is earnestly solicited. As such, allowance of Claims 1-20 is earnestly solicited.

Claims 6-20 are rejected, under 35 U.S.C. §112, second paragraph, as being allegedly indefinite for failing to particularly point out and distinctly claim the subject matter of the present invention because independent Claims 6 and 14 recited "In an in-circuit emulation system ... a method ... comprising" but the dependent claims recited "the in-circuit emulation system as described" in the independent claims. As a result, Applicant has respectfully amended the preamble of the independent claims and the dependent claims to recite a method claim. As such, withdrawal of the rejection, under 35 U.S.C. §112, second

paragraph, as being allegedly indefinite for failing to particularly point out and distinctly claim the subject matter of the present invention is earnestly solicited. As such, allowance of Claims 6-20 is earnestly solicited.

Claim rejections 35 U.S.C. § 101

Claims 1-20 are rejected, under 35 U.S.C. §101, because it was alleged that the claimed invention is inoperative and therefore lacks utility. The Applicant respectfully disagrees but has respectfully amended Claim 1 to now recite computing a speculative condition jump address before a condition for the conditional jump instruction is satisfied, as claimed. As a result, the computation is based on an assumption that a condition is satisfied. As such, independent Claim 1 has utility and is patentable, under 35 U.S.C. §101. Independent Claims 6 and 14 have been amended to recite limitations similar to that of independent Claim 1 and are patentable for similar reasons. Dependent claims are patentable by virtue of their dependency. As such, allowance of Claims 1-20 is earnestly solicited.

Claims 6, 9-12, 14 and 17-20 are rejected, under 35 U.S.C. §101 because the claimed invention is allegedly directed to non-statutory subject matter. Applicant respectfully disagrees. However, in the interest of expediting the prosecution of this case, Applicant has amended the independent Claims 6 and 14 to recite executing instruction based on the determination, as claimed. As a

result, the recited determination is useful because the instruction is executed based on that determination. As such, withdrawal of the rejection, under 35 U.S.C. §101 is earnestly solicited. As such, allowance of Claims 6, 9-12, 14 and 17-20 is earnestly solicited.

For the above reasons, the Applicant requests reconsideration and withdrawal of these rejections under 35 U.S.C. §101 and 35 U.S.C. §112.

CONCLUSION

In light of the above listed remarks, reconsideration of the rejected Claims 1-20 is requested. Based on the arguments presented above, it is respectfully submitted that Claims 1-20 overcome the rejections of record and, therefore, allowance of Claims 1-20 is earnestly solicited.

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Respectfully submitted,
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